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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,319

03/31/2004

Kenneth Wayne Todd

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46917

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04/25/2008

KONRAD RAYNES & VICTOR, LLP.

ATTN: IBM37

315 SOUTH BEVERLY DRIVE, SUITE 210

BEVERLY HILLS, CA 90212

EXAMINER

KIM, HONG C.

ART UNIT

PAPER NUMBER

2185

MAIL DATE

DELIVERY MODE

04/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/815,319	<b>Applicant(s)</b> TODD ET AL.	
	<b>Examiner</b> Hong Kim	<b>Art Unit</b> 2185	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13 and 36-39 is/are allowed.
- 6) ☒ Claim(s) 1-9, 14-26, and 27-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/31/04 and 1/30/07</u> .                                     | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-39 are presented for examination. This office action is in response to the application filed on 3/31/04.

2. Acknowledgment is made of applicant's Information Disclosure Statement (IDS) Form PTO-1449, filed 3/31/04 and 1/30/07. The information disclosed therein was considered.

### ***Specification***

3. The status of the referenced U.S. applications must be updated accordingly (e.g., U.S. Patent Application Serial No. #####,### filed Sept. 07, 1990, now abandoned; ..., now U.S. Patent #,###,### issued Jan. 01, 1994; or This application is a continuation of Serial Number #####,###, filed on December 01, 1990, now abandoned; ...etc.) in the Related Applications section and in any other corresponding area in the specification, if any.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title should be more specific to differentiate the invention from similar inventions in the patent literature. The "a location identifier", "an array pointer", and "a data structure" aspects of the invention should be mentioned in the title so that the title is more descriptive.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 14-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. An article of manufacture is not patentable since claimed "the article of manufacture" defines 'a transmission media, such as a network transmission line, wireless transmission media, signals propagating through space, radio waves, infrared signals, etc." paragraph 50. These are not patentable, by statute, as these are not tangible. Also the article of manufacture should include "a computer readable medium containing instructions which executable by a computer".

***Claim Rejections - 35 USC ' 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-9, 14-22, 27-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Applicant's Prior Art (Fig. 1 and pp 1-3) in view of Garcia US Patent No. 5414826.

As to claims 1, 14 and 27, AAPA discloses a method comprising:  
obtaining a location identifier (para [0006-0009]) of a destination of a write operation; storing the location identifier in an available entry of an array (Fig. 1 Ref. 12a)

However, AAPA does not specifically disclose said entry being identified by an array pointer having a first value; and changing the value of said array pointer to a second value to identify another available array entry.

Garcia discloses said entry being identified by an array pointer (Fig. 3 Ref. Free Pointer Index) having a first value; and changing the value of said array pointer to a second value to identify another available array entry (col. 4 lines 35-60) for the purpose of preventing a memory allocation error and increasing data access speed.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate said entry being identified by an array pointer having a first value; and changing the value of said array pointer to a second value to identify another available array entry as taught by Garcia into the system of AAPA for the advantages stated above.

As to claims 2, 15, and 28, Garcia further discloses wherein the entries of the array in which location identifiers are stored form a stack of array entries and wherein said storing stores the location identifier of a write operation in the next

available entry of said array (Fig. 3 and col. 4 lines 35-60).

As to claims 3, 16, and 29, Garcia further discloses wherein said, said array pointer is an index, and said changing includes incrementing said array pointer index to identify the next entry of the array as the next available entry of said array (Fig. 3 and col. 4 lines 35-60).

As to claims 4, 17, and 30, AAPA further discloses upon completion of a write operation, removing the location identifier of the completed write operation destination from the stack of array entries and reducing the size of said stack of array entries (para [0005-0009]).

As to claims 5, 18, and 31, AAPA and Garcia further discloses said reducing includes removing (AAPA paras [0005-0009]) the last entry of said stack of array entries by decrementing said array pointer index (Garcia, Fig. 3 and col. 4 lines 35-60) to identify the previous entry of the array as the next available entry of said array.

As to claims 6, 19, and 32, AAPA further discloses upon completion of a write operation, moving the location identifier stored in the last entry of said stack of array entries to the stack entry containing the location identifier of the completed write operation and overwriting the location identifier of the completed

write operation with the moved location identifier; and removing the last entry of said stack of array entries by decrementing said array pointer index to identify the previous entry of the array as the next available entry of said array (AAPA paras [0005-0009]).

As to claims 7, 20, and 33, Garcia further discloses storing the array pointer first value in a data structure entry (Fig. 3).

As to claims 8, 21, and 34, AAPA further discloses updating a logical redundancy check (Fig. 1 Ref. 14) of the contents of the reduced stack.

As to claims 9, 22, and 35, AAPA further discloses wherein said array is implemented in nonvolatile storage memory (para 0004]).

#### ***Allowable Subject Matter***

8. Claims 23-26 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action.
9. Claims 10-13 and 36-39 are allowed.

#### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

2. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).

3. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. ' 1.111(c).

4. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong C Kim whose telephone number is (571) 272-4181. The examiner can normally be reached on M-F 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on (571) 272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be



directed to the TC 2100 whose telephone number is (571) 272-2100.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**7. Any response to this action should be mailed to:**

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**or faxed to TC-2100:**  
(571)-273-8300

Hand-delivered responses should be brought to the Customer Service Window (Randolph Building, 401 Dulany Street, Alexandria, VA 22314).

/Hong Kim/  
Primary Examiner, Art Unit 2185  
April 23, 2008